Application Serial No. 09/757,930 Date June 13, 2005 Reply to Office Action dated March 11, 2005

Listing of the Claims:

- 1. (Cancelled.)
- 2. (Currently Amended) A system as defined by claim + 33 further comprising means for commanding the positioning of a pointing icon on the display.
- 3. (Currently Amended) A system as defined by claim ± 33 further comprising means for commanding the input of data into the device using the display.
 - 4. (Cancelled.)
- 5. (Currently Amended) A system according to claim † 33 further comprising means for selecting different regions of the display by way of changing the position, attitude, or presentation of the naked hand or finger of the human user.
- 6. (Currently Amended) A system according to claim † 33 further comprising means for selecting, highlighting, or defining a particular point or region on the display.
- 7. (Currently Amended) A system according to claim ± 33 wherein the naked hand or finger defines a vector on the plane of the display that indicates a direction and magnitude relative to or with respect to an item on the display or a region of the display.
- 8. (Previously Presented) A system according to claim 2 wherein the pointing icon on the display can be registered by the camera that has in its field of view the naked hand or finger of the human user.

- 9. (Currently Amended) A system according to claim 2 further comprising means for correcting the offsets between (i) the position of the naked hand or finger of the human user and (ii) the position of the pointer icon on the display.
- 10. (Currently Amended) A system as defined by claim † 33 further comprising:
- a. means for selecting or highlighting a specific item or icon on the display,
- b. means for activating a specific process, program, or menu item represented on the display, and
- means for writing, scribing, drawing, highlighting, annotating,
 or otherwise producing marks on the display.

11. (Cancelled.)

- 12. (Currently Amended) A method according to claim 11 34 wherein at least one characteristic that distinguishes the naked hand or finger from other objects in the image registered by the camera is known a priori.
- 13. (Currently Amended) A method according to claim 11
 34 wherein at least one characteristic that distinguishes the naked hand or finger in the image from the camera is determined based on analysis of at least one image of the same naked hand or finger acquired from the camera.
- 14. (Previously Presented) A method according to claim 13 wherein at least one characteristic that distinguishes the naked human hand or finger from other objects, whose rendition are present in the image from the camera, is obtained by

- a. acquiring at least two images from the camera, one with the pointing object in view of the or the camera and one without, and
 - b. comparing the two sets with one another.
- 15. (Previously Presented) A method according to claim 11 wherein adjustments or modifications are made to the position, viewing angles, sensitivity, and other settings of the camera pursuant the analysis of the image retrieved from the camera.
- 16. (Previously Presented) A method according to claim 11 wherein at least part of the procedures for the method is carried out using at least in part the computing mechanisms available on one or more of the following: the display, or the camera, or the device producing the signal shown on the display, or the device producing the pointing icon on the display.

Claims 17 - 30 (Cancelled.)

31. (Previously Presented) A system according to claim 2, further comprising another camera and wherein the pointing icon on the display can be registered by the other camera.

32. (Cancelled.)

- 33. (New) A virtual display system for use with a device having a display and for interacting with the device through the display, the system comprising:
- (1) a camera, capable of sensing the spectrum of light visible to the naked human eye, said camera positioned to capture an image including at least one naked finger or naked hand of a human user and excluding the display;

- (2) a means for identifying at least one naked finger or naked hand of the human user in the image captured by the camera as a pointer;
- (3) means for defining a virtual display space around at least one finger or hand of the human user in the image captured by the camera; and
- (4) means for establishing a mapping between the position that the human user's naked finger or hand is pointing to and the corresponding region of the display of the device.
- 34. (New) A method for defining a virtual display space for the human user of a device with a display to interact with the device through its display, comprising the steps of:
- (a) positioning a camera, capable of sensing the spectrum of light visible to the naked human eye, to capture an image including at least one naked finger or naked hand of the human user, and excluding the display;
- (b) identifying at least one naked finger or naked hand of the human user in the image captured by the camera as a pointer;
- (c) asking the human user to position at least one naked finger or naked hand to point to specific points on the display for the device;
- (d) capturing images of the human user as the user points to the specific points;
- (e) detecting the positions that the user has pointed to in the images captured by the camera;
- (f) based on the image coordinates of the detected positions, setting the boundaries of the virtual display space; and
- (g) designating within the set boundaries, a continuous finite space to be the virtual display space.